

REMARKS

Claims 1-16 were presented for examination in the present application. The instant amendment adds new claim 17. Thus, claims 1-17 are presented for consideration upon entry of the instant amendment.

Claims 1 and 9 were objected to for informalities. Appropriate correction to claims 1 and 9 is submitted in the instant amendment to remove the informalities identified in the Office Action. Reconsideration and withdrawal are requested.

Claims 11 through 13 and 16 were rejected under 35 U.S.C. §102(b) as anticipated by Japanese Publication No. 06189469 (Kojima).

Claim 11 provides a circuit topology that requires "uninterrupted load current to said load during a transfer between said first and said second power converters."

The uninterrupted load current during a transfer between said first and said second power converters is not disclosed or suggested by Kojima. The circuit disclosed by Kojima provides battery back up for each individual converter, but the backup system does not enable uninterrupted load current during a transfer between first and second power converters. Kojima is focused on supplying uninterrupted AC output 8A due to DC power supplied to inverter 4A from a battery 5A in a single supply unit 9A. See Abstract.

Claim 11 recites an entirely different arrangement where first and second contactors are selectively coupled to two separate power converters, and the first and second contactors have an output. This configuration is arranged to provide uninterrupted load current during a transfer between the first and second power converters. A major problem with conventional redundant power conversion systems is that they cannot provide uninterrupted load current during switching between power converters. In other words, the output load must be reduced to zero before the load can

be transferred from one power converter to the other power converter. The circuit recited in claim 11 does not require output load to be reduced to zero. See paragraphs [0031] through [0033].

The key difference between claim 11 and Kojima is that the transfer circuit recited in claim 11 provides uninterrupted load current during the transfer between the first and second power converters. Kojima does not disclose this feature. Specifically, Kojima describes a circuit with a converter 3A with input breaker 2A and output side switch 12A that can be turned off if the unit 9A fails. However, power converter 3A in 9A and power converter 3B in unit 9B are not selectively coupled to provide uninterrupted load current during a transfer between a first and a second power converter. Power converters 3A and 3B are not described as being capable of transferring power from one to the other. And 3A and 3B are particularly not described as having the ability to execute a transfer between them that can provide an uninterrupted load current.

Therefore, all the limitations of claim 11 are not disclosed or suggested by Kojima and claim 11 is in condition for allowance. Reconsideration and withdrawal is requested.

Since claims 12, 13 and 16 depend from the aforementioned claim 11, they are also believed to be in condition for allowance. Reconsideration and withdrawal are requested.

Claims 1 through 4 and 7 through 10 were rejected under 35 U.S.C. §103 over Kojima and U.S. Patent No. 6,037,752 (Glennon).

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Claim 1 provides a method of selectively coupling a first power converter or a second power converter to a controlled commutating current path, and disconnecting the first or second power converter from the controlled commutating

current path, where a load current is uninterrupted during said switching between said first and said second power converters. That claim element, which requires the load current to be uninterrupted during switching between the first and second power converters, is one element not disclosed or suggested by Kojima. That element is also not disclosed or suggested by Glennon or the combination of Kojima and Glennon.

Therefore all the elements of claim 1 are not disclosed or suggested, and claim 1 is in condition for allowance. Reconsideration and withdrawal are requested.

Since claims 2 through 4 and 7 through 10 depend from the aforementioned claim 1, they are also believed to be in condition for allowance. Reconsideration and withdrawal are requested.

Claims 5 and 6 were rejected under 35 U.S.C. §103 over Kojima, Glennon and U.S. Patent No. 5,353,665 (Heebner).

The passage cited by the examiner from Heebner, col. 5, lines 15-30, does indeed state that "Most relays are multi-pole break before make type." However, this statement was in reference to the point that most relays used in the Heebner control circuits are the multi-pole break before make type, not a general statement that most relays would use are multi-pole break before make type in every application.

The arrangement in claim 5 recites that selective coupling is accomplished using single multi-pole contactors. It has been shown above that specific type of selective coupling, which enables load current to remain uninterrupted during switching between a first and a second power converter, is not disclosed or suggested by Kojima and Glennon alone or in combination. Heebner, may describe the use of multi-pole break before make type relays, but Heebner fails to provide any disclosure or suggestion of a circuit that can provide load current that remains uninterrupted during said switching between said first and said second power as described in claim 1, and through dependency in claim 5.

Heebner fails to cure the defects of the combination of Kojima and Glennon as it relates to selectively coupling a first and a second power converter to provide uninterrupted load current during switching between a first and a second power converter. Therefore, the combination of Kojima, Glennon, and Heebner fails to disclose or suggest all the elements claim 5, and it is in condition for allowance.

Since claim 6 depends from the aforementioned claim 5, it is also believed to be in condition for allowance. Reconsideration and withdrawal are requested.

Claims 14 and 15 were rejected under 35 U.S.C. §103 over Kojima and Heebner.

Claim 14 is considered patentable for reasons similar to those expressed above regarding claim 5 and 6. Specifically, the arrangement in claim 14 recites that selective coupling is accomplished using single multi-pole contactors. Heebner, may describe the use of multi-pole break before make type relays, but Heebner fails to provide any disclosure or suggestion of a circuit that can provide load current that remains uninterrupted during said switching between said first and said second power as described in claim 11.

Therefore, Heebner does not cure the defects of Kojima, and the combination of Kojima and Heebner also fails to disclose or suggest all the elements of claim 11. As discussed *supra*, claim 11 provides a circuit topology that requires "uninterrupted load current to said load during a transfer between said first and said second power converters." According to the arguments above, Kojima fails to disclose or suggest this element. See arguments *supra* regarding Claim 11.

Since claim 14 depends from the aforementioned claim 11, and because Heebner fails to cure the defects of Kojima the combination of Heebner and Kojima fails to disclose or suggest all the elements of claim 14. It is also believed that claim 14 is in condition for allowance. Reconsideration and withdrawal are requested.

Since claim 15 depends from the aforementioned claim 14, it is also believed to be in condition for allowance. Reconsideration and withdrawal are requested.

Claim 17 have been added to point out various aspects of the present application.

Support for new claim 17 can be found in the specification at least in paragraphs [0026] through [0032].

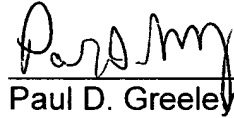
It is believed that new Claim 17 are in a condition for allowance. For example none of the cited art discloses or suggests alone or in combination a transfer circuit that has a topology including: (a) a first contactor having an input selectively coupled to a first power converter; (b) a second contactor having an input selectively coupled to a second power converter; and (c) a controlled commutating current path coupled to an output of said first contactor and said second contactor and to a load for providing an uninterrupted load current to said load during a transfer between said first and said second power converters, wherein only said first power converter or said second power converter is coupled to a power source at any given one time.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below.

Respectfully submitted,

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